

Amendments to the Drawings:

The attached sheets of drawings include changes to Figs. 1, 2, 8 and 9. These sheets replace the original sheets including Figs. 1, 2, 8 and 9. In these Figs., descriptive text labels have been provided for the boxes as required. No annotated sheets are provided as the textual changes are self-evident.

REMARKS

This is a full and timely response to the Office Action of December 2, 2008. By the present amendment, the drawings have been amended to add textual labels to the boxes in Figs. 1-2, 8-9 and Applicant submits that the presently amended drawings are in full compliance with 37 CFR 1.121. No new matter has been added. Further consideration and allowance of this application and all presently pending claims are respectfully requested, on the following basis.

Response to 35 USC 103 rejections

In the Office Action dated December 2, 2008, the Examiner has rejected all pending claims under 35 USC 103(a) based on the previously cited Sadhwani and Chong references, in further view of U.S. Patent Application 2001/09910268 to Hatori et al. (hereafter "Hatori"). Based on the present remarks, Applicant submits that these rejections have been traversed and that the present claims are allowable over all prior art of record, considered singly or in combination.

The Sadhwani and Chong references have been distinguished in prior responses and clearly lack in teaching, among other things, context or topic recognition. With respect to the independent claims, Applicant submits that the Examiner's citation of Hatori does not teach the claim elements for which it has been cited.

In the Office Action, the Examiner has cited Hatori against the following claim 1 elements:

- detecting a first topic based on the voice input signal by matching words in the first voice input signal to nodes in an ontological database;
- associating at least a first one of the translation dictionaries with the input signal based on the detected first topic; ...
- detecting a topic change indicating a second topic associated with the second voice input signal that is different from the first topic;
- and
- associating at least a second one of the translation dictionaries with the second input signal based on the detected second topic

Although Hatori describes the value of being able to switch dictionaries, and proposes one method for doing so, its method for switching differs considerably from the one proposed and claimed according to the present invention. The Hatori approach is limited both in its efficiency and its efficacy. In particular, repeated reference is made in Hatori to six particular sublanguage dictionaries in use: Internet, Art, Business, Sports, Politics, and Entertainment. This is made clear in paragraphs 0005 and 0048. Paragraph 0048 further makes clear that these dictionaries have a fixed priority order and that while the order can be changed (see 0049), other elements include only “a base [core] dictionary 6” and “an optional user dictionary 8” (which we see is akin to the result when one adds words to the spellchecker dictionary in a word processor; cf. Hatori paragraph 0043). By contrast, the present invention provides a sublanguage dictionary with vastly more capabilities, including the ability to determine which dictionary is most properly employed and when (see paragraph 0059, for example, of the present application publication), such as when a topic change is detected as claimed.

Hatori decides whether to use one sublanguage dictionary over another through a system of “keywords”. Hatori’s system relies upon “an appropriate and predetermined keyword for each dictionary”, to be used “when the keyword appears in the source text”, which triggers an automatic switching of dictionaries. Hatori’s method is more prone to errors as a result of lack of nuance. One can easily conceive of numerous situations where any word being used as a keyword might be not intended by its author or speaker as signifying the particular subject domain that the keyword is tied to. For example, even though “back stroke” may indicate a reference to the sport of swimming in the majority of cases, and could conceivably be a keyword, it may in fact refer to a medical situation involving a ruptured artery, and only an assessment of the context can accurately distinguish. Likewise “common stock” may be used primarily when discussing financial business, but such a term may not-infrequently be used when discussing anything from farming to pharmaceuticals. Context is the true distinguishing factor.

Topic detection according to the present invention as claimed is distinguished from Hatori by the use of ontological databases with topic hierarchies. In an exemplary but not limiting respect, the difference can be likened to a genealogy tree (navigating down to the most appropriate node), as opposed to the waterfall approach suggested by Hatori (using keywords to “fall” from tier to tier until a match is found). Nowhere in Hatori’s discussion is a reference to “context” or contextual analysis found. Furthermore, neither Hatori nor Sadhwani nor Chong ever mention ontological databases. As described in paragraphs 0058 through 0061 of the present invention, the use of n-gram windows to determine a place within a specific lexical hierarchy is an essential element of the process, as an n-gram is a probabilistic data model for

predicting the next item in a sequence. The present invention uses an ontological database to classify input text based on sub-classes and super-classes, then to generate a list of possible topics, and finally use n-gram models to determine the most likely topic based on threshold indicators. Thus, the following claim 1 elements – specifying the matching to an ontological database, and the resulting association to a topic – correspond to elements not shown by Hatori:

- detecting a first topic based on the voice input signal by matching words in the first voice input signal to nodes in an ontological database;
- associating at least a first one of the translation dictionaries with the input signal based on the detected first topic; ...
- detecting a topic change indicating a second topic associated with the second voice input signal that is different from the first topic;
- and
- associating at least a second one of the translation dictionaries with the second input signal based on the detected second topic

As noted in paragraph 0058 of the present application publication, the use of this methodology “has not previously been thought of as a natural candidate for knowledge-based approaches” to dictionary selection. This remains true even in view of Hatori, Sadhwani and Chong in combination.

Applicant submits that the remaining independent claims 10, 11, 22, 23, and 27 are similarly distinguished from the cited references for the same reason. For the above reasons, Applicant submits that none of the Sadhwani, Chong or Hatori references, either singly or in combination, discloses, teaches or suggests the invention as presently claimed. The prior art must teach or suggest *all* claim elements in order to find anticipation or obviousness, and *all* words in a claim must be considered in judging the patentability of that claim against the prior art (see MPEP §§ 706.02(j) and 2143.03). Applicant thus submits that independent claims 1, 10,

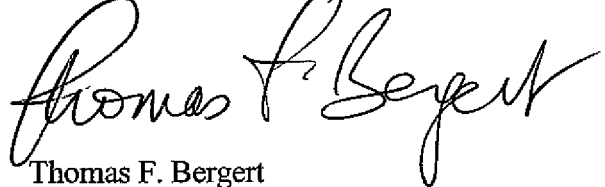
11, 22, 23 and 27 are allowable, and that the dependent claims are also allowable based upon being dependent from an allowable independent claim.

Conclusion

Based on the foregoing, Applicant submits that the present application is in position for prompt adjudication and allowance. Applicant believes that all of the claims currently pending the present application are allowable over the prior art of record, and an early notice to that effect is earnestly solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the present application, the Examiner is invited to contact Applicant's undersigned representative at the address and phone number provided below.

A three-month extension of time is being filed simultaneously with this Amendment, along with a Request for Continued Examination. The Commissioner is hereby authorized to charge Deposit Account No. 50-0766 in payment of the required fees.

Respectfully submitted,
WILLIAMS MULLEN, PC

A handwritten signature in black ink, appearing to read "Thomas F. Bergert", written over the printed name.

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Attached: Petition for 3-month extension of time
Replacement drawing sheets

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